



# PERCEPTIONS OF TEACHERS TOWARDS THE QUALITY OF IN-SERVICE TEACHER TRAINING PROGRAMME IN PUNJAB

Sandeep Kumar

Assistant Professor, Regional Institute of Education, Bhubaneswar, India.

## ABSTRACT

The in-service teacher training programme covered various pedagogical issues, including content and methodology, aimed to improve teaching-learning transactions in classrooms and learning processes in schools but the satisfaction of teachers from these training programmes is of utmost importance. Present paper studies the perceptions of teachers towards the quality of in-service teacher training programme in Punjab. A sample of 237 primary school teachers from 80 schools of 10 districts (5 high literacy rate and 5 low literacy rate) based on the census of 2011 (Punjab) was taken randomly for the study. Data was collected using the self-constructed In-service teacher training programme's quality assessment scale. The results of the present study revealed overall positive perceptions of teachers towards the quality of in-service teacher training programmes and do not find any difference in the perception of teachers towards in-service teacher training programmes on the bases of gender as well as with respect to literacy status.

**KEYWORDS:** In-service training programme, gender, literacy status, Sarva- Shiksha- Abhiyan.

## INTRODUCTION:

In-service teacher training is necessary to keep the attention focused on the need for improved quality of educational outcome through better performance and helps in maintaining an environment that would facilitate the quality learning in schools through teachers' own commitment. Another important feature of the in-service teacher training programmes is the partnership between government bodies and non- governmental organizations (NGOs) with field experience in teacher training. National Knowledge Commission (2007) stressed the need to strengthen the teaching community qualitatively and recommended more incentives for qualified and committed teachers; no to Non-teaching official duties the teaching process; development of forums to exchange ideas, information, and experiences, including a web-based portal; improvement in pre-service training in both public and private institutions; expansion of systems for in-service training. Similarly, Teacher training under SSA emphasizes child-centered pedagogy and activity-based teaching-learning. NCERT has prepared guidelines for in-service teacher training under SSA that has been shared with all states (NCERT, 2007). The SSA framework gave more emphasis to practical classroom-related teacher training by providing for a maximum of ten days institutional training at BRCs level, and another ten days specifically at cluster/ school level in order to ensure follow-up, peer learning and experience practical classroom transactions (SSA). Omar (2014) discussed that few factors that contribute towards the effectiveness of in-service training are the role of administrator, attitudes of teachers, training needs and strategies in conducting in-service training. Several NGOs, including multi-lateral organizations, support various interventions, including in-service training activities (MHRD, 2016). Agarwal and Kamlesrao (1997) found that a considerable amount of content was not transacted in the training programmes. Chakrabarty and Bagchi (2005) assessed that the in-service training programme was not effective in orienting the teachers towards the need for closing the intergroup disparities. Many of the teachers suspected its applicability in unfavourable classrooms. Mahanta and Barua (2008) observed that the In-service training organized by elementary teacher training institutes did not make any distinguishable impact. Lingam (2012) revealed that the beginning teachers were generally positive about their training programme. Surapuramath (2012) concluded that there was no significant difference between the attitude of rural and urban, male and female teachers' attitude towards in-service training programs of SSA. Uysal (2012) indicated that although the teachers' attitudes are positive towards the course in general, the program had limitations in terms of its planning and evaluation phases and its impact on teachers' practices. Yadav (2012) revealed there is a need to organize training programmes for resource persons where focus should be on practicing training skills including use of ICT; easily understandable language of the training package; monthly meeting for teachers; and the performance of teachers should be evaluated for providing feedback and improving follow-up. Safi (2014) illustrated that both male and female teachers have the same perception of trainers' qualifications. Lack of professional trainers was another issue toward the effective implementation of the programme. Thecla (2016) revealed that training and retraining enhanced teachers' productivity to a great extent. It also revealed that the perception of males and females differed on the impact of training and retraining on teachers' productivity. Kusum (2016) found no significant difference between the attitude of rural and urban Elementary School teachers towards Sarva Shiksha Abhiyan. There was a significant difference between the attitude of male and female Elementary School teachers towards Sarva Shiksha Abhiyan. Nikhat and Khan (2017) showed that in-service training specially refresher courses are responsible for the improvement in the quality of teaching in senior secondary school teachers of

Aligarh district. Sedega, Mishiwo, Seddo and Dorkenoo (2019) revealed that the programmes organized for teachers are adequate and very effective with regards to teaching and learning in the district.

## OBJECTIVES OF THE STUDY:

The study was designed to attain the following objectives:

- To study the perceptions of teachers towards the quality of in-service teacher training programme's in relation to quality-related interventions under Sarva-Shiksha-Abhiyan in Punjab.
- To compare the perceptions of teachers towards the quality of in-service teacher-training programme's w.r.t. gender under Sarva-Shiksha-Abhiyan in Punjab.
- To compare the perceptions of teachers towards the quality of in-service teacher-training programme's w.r.t. literacy status under Sarva-Shiksha-Abhiyan in Punjab.

## HYPOTHESES:

- H<sub>0</sub>. There exists no significant effect of quality-related interventions under Sarva- Shiksha- Abhiyan on the perceptions of teachers towards the quality of in-service teacher training programmes in Punjab.
- H<sub>0</sub>. There exists no significant difference in teachers' perceptions towards the quality of in-service teacher training programmes with respect to gender in relation to quality-related interventions under Sarva-Shiksha-Abhiyan in Punjab.
- H<sub>0</sub>. There exists no significant difference in perceptions of teachers of high and low literacy rate districts towards the quality of in-service teacher training programmes in relation to quality-related interventions under Sarva-Shiksha-Abhiyan in Punjab.

## METHODS AND PROCEDURE:

It incorporates the design of the study, sample, tools used for the data collection and statistical technique employed to analyze the data.

### Design of the study:

The descriptive survey method was used for investigation. Teachers' perceptions about in-service training programme's quality were assessed by closed-ended questionnaires to have a deeper understanding of the Sarva-Shiksha-Abhiyan interventions.

### Sample:

For the present study, 10 districts were selected, 5 districts having high literacy rate and 5 districts having low literacy rate as per Census report, 2011 of Punjab. Further from each district 2 educational blocks were selected randomly and from these blocks, four primary schools were randomly selected. The study was conducted on a randomly selected sample of 80 primary schools of Punjab. Sample of the study comprised 237 primary teachers.

### Data Collection Tools:

- In-Service Teacher Training Programme's Quality Assessment Scale (developed by the investigator).

**Descriptive Analysis of Perceptions of Teachers towards Quality of In-Service Teacher Training Programme:**

The mean, standard deviation, skewness and kurtosis on total scores and on six

dimensions related to perceptions of teachers towards the quality of in-service teacher training programme was calculated and presented in table 1.

**Table 1: Descriptive Analysis of Scores of Teachers on In-Service Teacher Training Programme and its various Dimensions**

Variables	Mean	Standard Deviation	Skewness	Standard Error	Kurtosis	Standard Error
In- Service training	156.14	19.43	.142	.158	-.094	.315
Training Curriculum	18.05	2.95	-.051	.158	-.544	.315
Training Environment	22.95	3.56	.375	.158	-.671	.315
Role of Resource Persons	34.01	4.89	.235	.158	-.152	.315
Participation of Trainees	37.25	5.84	-1.080	.158	3.269	.315
Role of Trainees	25.57	4.24	-.171	.158	-.104	.315
Evaluation of Training and Behaviour Change	18.31	3.56	-.264	.158	-.146	.315

From table 1., the mean for the total sample is 156.14 and the standard deviation is 19.43. Skewness value of .142 and (SE=.158), z- value of skewness came out to be 0.898, which was neither below -1.96 nor above +1.96, it showed that the data was slightly +ve skewed; and kurtosis value of -.094 and (SE=.315), z- value of kurtosis came out to be -0.298, which was neither below -2.58 nor above +2.58, it showed that the data was slightly platykurtic, although the distribution was approximately normal.

For further checking the normality of data Kolmogorov- Smirnov statistic with a Lilliefors significance correction and a Shapiro- Wilk statistic was computed. The results of the test are presented in table 2.

**Table 2: Kolmogorov- Smirnov and Shapiro- Wilk Test of Normality for Perceptions of Teachers towards Quality of In-Service Teacher Training Programme**

Perceptions of Teachers towards Quality of In-Service Teacher Training Programme	Kolmogorov- Smirnov			Shapiro- Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
	.057	237	.062	.991	237	.145

From table 2, significant value (p-value) for Kolmogorov- Smirnov (.062) and Shapiro- Wilk test (.145), which was higher than 0.05, which showed that there was a statistically non-significant result and the distribution was normal. So, it can be inferred that dependent variable perceptions of teachers towards the quality of in-service teacher training programme were normally distributed; hence, parametric tests were used to analyze the data.

**Analysis of Teachers' Responses on Various Dimensions of In-Service Teacher Training Programme's Quality Assessment Scale:**

In-service teacher training programme's quality assessment scale is a Likert type scale. A mean score of 3.5 or above would indicate a high perception of teachers towards in-service teacher training programme's quality; a mean score below 3.5 up to 3 would indicate average perception of teachers towards in-service teacher training programme's quality and mean score below 3 would indicate a low perception of teachers towards in-service teacher training programme. The total scores on the perception of teachers towards the in-service teacher training programme's quality are presented in table 3.

Sr. No.	Dimensions of In-Service Teacher Training Programme's Quality Assessment Scale	Mean
<b>D- I</b>	<b>Training Curriculum</b>	<b>3.61</b>
1	Training program was developed by looking after the teachers' needs.	3.72
2	The training module and the material were thoroughly tested before implementation.	3.60
3	In the training program, information about various technologies and other supporting material was given.	3.86
4*	There was no combination of written work and experimentation in the training program.	3.43
5*	There was no participation of teachers in preparation of training modules and material.	3.44
<b>D- II</b>	<b>Training Environment</b>	<b>3.82</b>
6	At the time of training, objectives of training were explained to resource persons and trainees.	3.86
7	During training, material and social conditions were helpful for training.	3.84
8	There was a good system of air and light in the training room.	4.07
9	During training television, computers and other technologies were available.	3.59
10	The teaching-learning material prepared by trainees was displayed in the training room.	3.87
11*	Teaching-learning materials required for training were not available.	3.72
<b>D- III</b>	<b>Role of Resource Persons</b>	<b>3.77</b>
12*	Resource persons were not expert in their subject.	3.48
13	Resource persons had attended courses for training of the elementary teachers.	3.86
14	Resource persons had the ability to use different training methods.	3.91
15*	Resource persons were not aware about the education system of Punjab.	3.73
16	Resource persons were aware of training modules and materials.	3.87
17	Resource persons shared their experience and material with trainees.	4.01
18	Resource persons were well prepared for the training.	3.85
19*	Resource persons used only lecture method for training.	3.60
20	Resource persons examined the needs of trainees and provided the right information when needed.	3.70
<b>D- IV</b>	<b>Participation of Trainees</b>	<b>3.72</b>
21	During training all trainees had an equal opportunity for participation.	3.84
22	There was active participation of trainees in training process.	3.96
23*	At time of training, trainees experience was not used.	3.73
24*	During training, there was less time for trainees' participation in activities.	3.57

25*	Trainees did not help each other during training.	3.65
26	Trainees were paid equal attention without discrimination of gender and caste.	3.79
27*	Communication between resource persons and trainees was not effective.	3.58
28	Resource persons were ready to help trainees during training.	3.95
29	Opportunities for the discussion related to the solution of the problems in different subjects were provided.	3.85
30	Full attention was paid to the suggestions given by trainees.	3.35
<b>D- V</b>	<b>Role of Trainees</b>	<b>3.65</b>
31	Trainees were aware of the purpose of training.	3.48
32*	Before training expectations of trainees were not tested.	3.21
33*	Trainees did not get the opportunities to connect their education with real life.	3.48
34	Trainees were interested and excited to learn.	3.99
35	The trainees were involved in the progress of the learning process.	4.01
36	Trainees did not consider training work as a burden.	4.00
37*	Trainees were not interested in using the given knowledge in the class.	3.41
<b>D- VI</b>	<b>Evaluation of Training and Behaviour Change</b>	<b>3.66</b>
38*	Assessment of trainees was not done at the end of the programme.	3.28
39	There were arrangements for the follow- up of trainees after training.	3.68
40	The training program has increased the teaching skills of trainees.	3.73
41	The training program has helped in enhancing knowledge and competence of trainees.	3.83
42	Resource persons provided feedback upon assessing the trainees' performance.	3.78

\*Negative items

Table 3. shows mean scores of the teachers for total scores on perceptions of teachers towards the quality of in-service teacher training programme's on different dimensions of scale. An examination of results showed that the teachers responded positively on most of the items of in-service teacher training programme's quality assessment scale and the total mean score on the scale has come out to be 3.71.

Hence, null hypothesis  $H_0$ , stating that there exists no significant effect of quality-related interventions under Sarva- Shiksha- Abhiyan on the perceptions of teachers towards the quality of in-service teacher training programmes in Punjab rejected. The findings revealed that the teachers had positive perceptions towards the quality of in-service teacher training programmes. The results of the present study are in agreement with the study of Lingam (2012), Nikhat and Khan (2017) and Sedega, Mishiwo, Seddoh and Dorkenoo (2019) but in contrast with Agarwal and Kamlesrao (1997), Chakarbarty and Bagchi (2005) and Mahanta and Barua (2008).

The dimension wise interpretation of results is presented as follows:

- **Training Curriculum:** The total mean scores on training curriculum has come out to be 3.61, which shows that teachers were highly satisfied with the training curriculum of the in-service teacher training programme. The mean scores on different components of the training curriculum pointed out that teachers felt that the training programme was developed by looking after the teacher's needs and training modules and materials were thoroughly tested before implementing. Teachers reported that information about various technologies and other supporting materials given to the teachers in the training programme. Teachers were not sure about the combination of written work and experimentation in the training programme and, they were undecided about teacher participation in training modules and material preparation.
- **Training Environment:** The total mean score on the dimension of the training environment has come out to be 3.82, which shows that the teachers were satisfied with the training environment of the in-service teacher training programme. The mean score on different components of the training environment showed that the objectives of the training were explained to the resource persons and trainees. They responded that during training, material and social conditions were helpful for training and there was a good system of air and light in the training room. During training television, computers and other technologies were available and teaching- learning material prepared by trainees was displayed in the training room. The teaching-learning material required for the training was also available in the in-service teacher training programme centers.
- **Role of Resource Persons:** The total mean score on the dimension of the role of resource persons has come out to be 3.77, which shows that teachers were satisfied with the role of resource persons. The mean score on different components of the role of resource persons indicated that resource persons were experts in their subjects, and they had attended the course for training the elementary teachers. Teachers responded that resource persons had the ability to use different training methods and they were aware of the education system of Punjab. Teachers reported that resource persons were aware of training modules and materials. Teachers perceived that resource persons

shared their experience and materials with trainees and were well prepared for training and instead of using only lecture method they used other methods of training also. As per teachers, resource persons also examine the needs of trainees and provide the right kind of information when needed.

- **Participation of Trainees:** The total mean score on the dimension of participation of trainees came out to be 3.72, which shows that there was active participation of trainees in the in-service teacher training programme. The mean scores on different components of participation of trainees' dimension show that during training all trainees had equal opportunities for participation and there was active participation of trainees in the training process. Teachers reported that at the time of training, trainees' experience was used and there was enough time for trainees' participation in activities. All the trainees helped each other during training and equal attention was paid without discrimination of gender and caste. Teachers responded that there was effective communication between resource persons and trainees. Teachers also responded that trainers were ready to help trainees during training; opportunities for discussion related to the solution of the problems in different subjects were provided but teachers were undecided about the attention paid to the suggestions given by trainees.
- **Role of Trainees:** The total mean score on the dimension of the role of trainees came out to be 3.65, which shows that trainees had a positive perception of the in-service teacher training programme. The mean scores on different components of the role of teacher dimension show that trainees were undecided about their awareness towards the purpose of training, they reported that before training expectations of trainees were not tested, even they were also undecided whether trainees got the opportunity to connect their education with real life. Trainees were interested and excited to learn and were involved in the progress of the learning process. Trainees did not consider training work as a burden, but they were undecided about using the given knowledge in the class.
- **Evaluation of Training and Behaviour Change:** The total mean score on the dimension of evaluation of training and behaviour change came out to be 3.66, which shows that in-service teacher training programme had provided the opportunity for evaluation of training and behavior change to the teacher. The mean score on different components of evaluation of training and behavior change showed that teachers were undecided about the assessment of trainees at the end of the programme, but they responded that there were arrangements for the follow- up of trainees after training. Teachers replied that the training program has increased their teaching skills and helped them in enhancing knowledge and competence. Teachers responded that resource persons also provided feedback after assessing the trainees' performance.

#### Analysis of Teachers' Perceptions towards Quality of In-Service Teacher Training Programme in relation to Gender:

To analyze teachers' perception towards the quality of in-service teacher training programme in relation to gender, the independent sample t-test was used for testing the differences between the means of two independent groups. The result of independent sample t-test for teachers' perceptions towards the quality of in-service teacher training programme in relation to gender is presented in table 4.

**Table 4: Independent Sample t-test for Perceptions of Female and Male Teachers towards Quality of In-Service Teacher Training Programme**

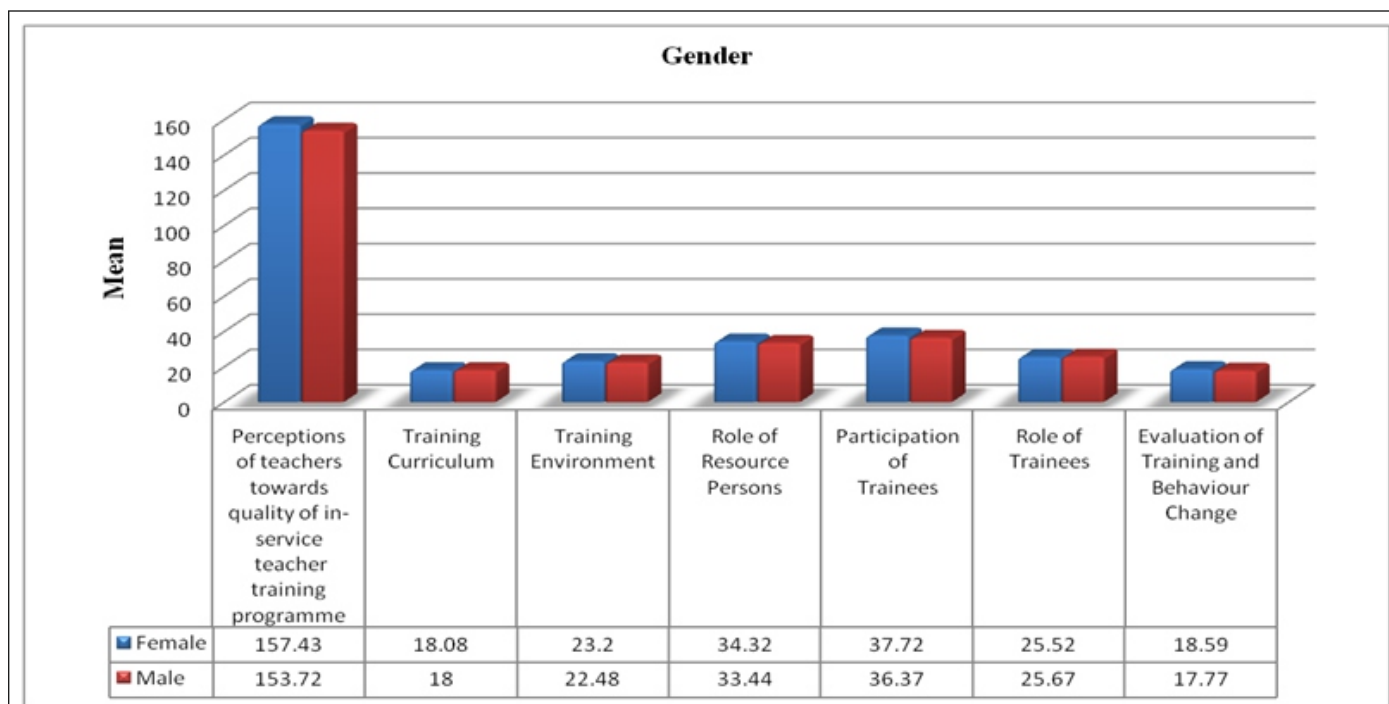
Perceptions of Teachers Towards Quality of In-service Teacher Training Programme	Gender	N	Mean	SD	SEM	SED	t- value	Sig.	df	Remarks
	Female	155	157.43	19.31	1.552	2.648	1.399	.163	235	Not significant
	Male	82	153.72	19.54	2.158					

It is clear from table 4., that t- ratio value is 1.399 at 235 degrees of freedom which was not significant even at 0.05 level of significance  $p > 0.05$  (.163). It may be inferred from the independent sample t-test table that there was no significant difference in the teachers' perceptions towards the quality of in-service teacher training programme with respect to gender, as the calculated value was lower than the table value.

Hence, null hypothesis H<sub>20</sub>, stating there exists no significant difference in teachers' perceptions towards the quality of in-service teacher training programme's with respect to gender in relation to quality-related interventions

under Sarva- Shiksha- Abhiyan in Punjab was accepted. It showed that male and female teachers have equal perceptions towards the quality of in-service teacher training programme in relation to Sarva- Shiksha- Abhiyan interventions in Punjab.

The results of the present study agree with the studies of Surapuramath (2012); Uysal (2012); and Safi (2014) who also reported that teachers had equal perceptions towards in-service training programme. The present study contrasted with the study of Thecla (2016) who revealed that male and female teachers differed on the impact training on teachers.

**Figure 1: Bar Diagram on Mean Scores on Perceptions of Female and Male Teachers towards Quality of In-Service Teacher Training Programme and its Dimensions**

From figure 1., the mean score on the perceptions of teachers towards the quality of the in-service training programme of female teachers (157.43) was higher than the male teachers (153.72). It also showed that perceptions of female teachers on different dimensions of scale i.e. training curriculum, training environment, role of resource persons, participation of trainees and evaluation of training and behaviour change was higher as compared to male teachers, except on the dimensions of role of trainees, where the male teachers scored higher than female teachers.

#### **Analysis of Teachers' Perception towards Quality of In-Service Teacher Training Programme in relation to Literacy Status of Districts:**

To compare teachers' perceptions towards the quality of in-service teacher training programme in relation to literacy status of districts, the independent sample t-test was used for testing the differences between the means of two independent groups. The result of independent sample t-test for teachers' perception towards the quality of in-service teacher training programme in relation to literacy status of districts is presented in table 5.

**Table 5: Independent Sample t-test for Perceptions of Teachers belonging to High and Low Literacy Rate Districts towards Quality of In-Service Teacher Training Programme**

Perceptions of Teachers towards Quality of In-Service Teacher Training Programme	Districts	N	Mean	SD	SEM	SED	t- value	Sig.	df	Remarks
	High Literacy Rate Districts	110	155.67	19.93	1.901	2.536	.346	.729	235	Not significant
	Low Literacy Rate Districts	127	156.55	19.06	1.691					

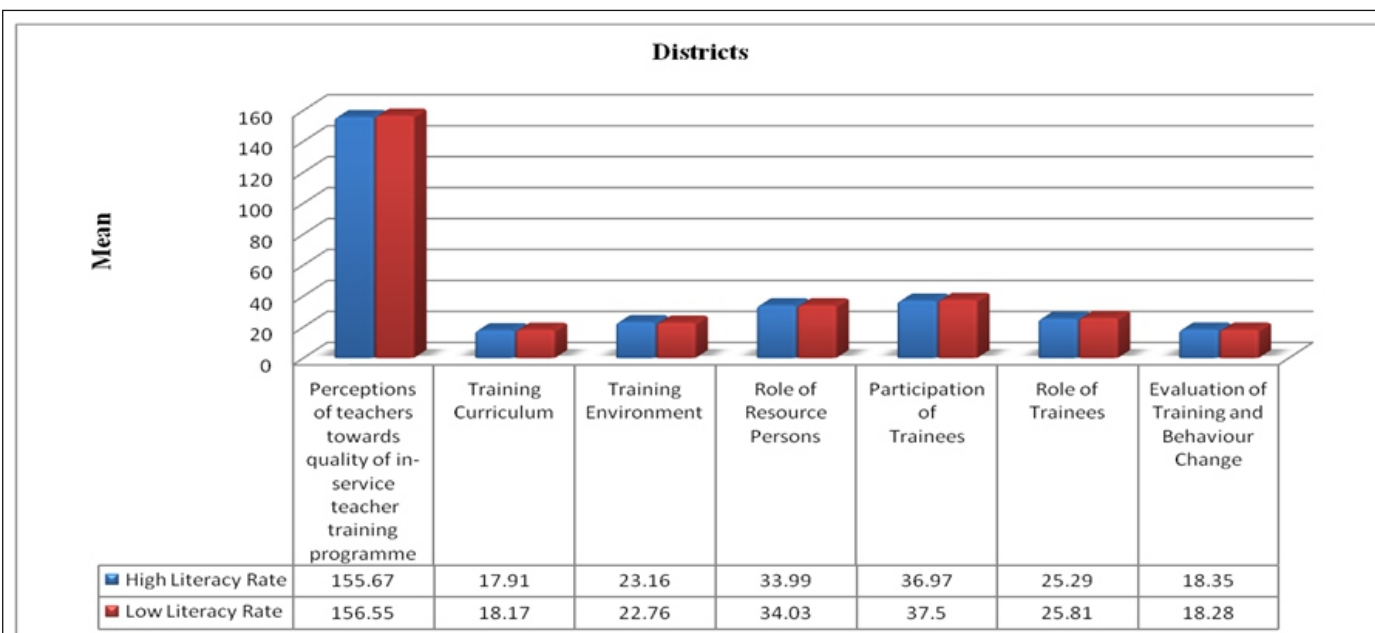
It is clear from table 5., that t- ratio value was .346 at 235 degrees of freedom which was not significant even at 0.05 level of significance  $p > 0.05$  (.729). It may be inferred from the independent sample t-test table that there was no significant difference in the teachers' perception towards the quality of in-service teacher training programme with respect to literacy status of districts, as the calculated value is lower than the table value.

Hence, null hypothesis H<sub>0</sub>, stating there exists no significant difference in perceptions of teachers of high and low literacy rate districts towards the quality of in-service teacher training programmes in relation to quality-related interven-

tions under Sarva- Shiksha- Abhiyan in Punjab was accepted. It showed that teachers belonging to high and low literacy rate districts have similar perception towards quality of in-service teacher training programme in relation to Sarva- Shiksha- Abhiyan intervention in Punjab.

The results of the present study are in consensus with the study of Surapuramath (2012); and Kusum (2016) who found no significant difference between the attitudes of teachers towards in-service teacher training programme from different areas.





**Figure 2: Bar Diagram Showing Total Mean Scores on Perceptions of Teachers' of High and Low Literacy Rate Districts towards Quality of In-Service Teacher Training Programme and its Dimensions**

From figure 2., the mean score on the teachers' perceptions towards quality of in-service teacher training programme from low literacy rate districts (156.55) was higher than the teachers from high literacy rate districts (155.67). It also showed that teachers' from low literacy rate districts scored higher on dimensions of training curriculum, the role of resource persons, participation of trainees and role of trainees; while teachers from high literacy rate districts showed higher mean scores on training environment and evaluation of training and behaviour change.

As no significant difference is found in the perceptions of male and female teachers and teachers belonging to high and low literacy rate districts towards the quality of in-service teacher training programme, it indicates that in-service teacher training programme is organized in similar conditions in the whole state of Punjab for all teachers.

## RESULTS AND DISCUSSION:

### Findings of the study:

- The quality-related interventions under Sarva- Shiksha- Abhiyan had a significant effect on the perceptions of teachers towards the quality of in-service teacher training programme in Punjab, as due to SSA interventions, the perceptions of teachers towards the quality of in-service teacher training programme has improved.
- The primary school teachers were having high perceptions of teachers towards the quality of in-service teacher training programme on the dimensions of training curriculum, training environment, the role of resource persons, participation of trainees, role of trainees and evaluation of training and behaviour change.
- The perceptions of primary school teachers towards the quality of in-service teacher training programme with respect to gender in relation to quality-related intervention under Sarva- Shiksha- Abhiyan in Punjab was not significantly different.
- The perceptions of primary school teachers of high and low literacy rate districts towards quality of in-service teacher training programme in relation to quality-related intervention under Sarva- Shiksha- Abhiyan in Punjab was not significantly different.

### Educational implications of the results of the study:

The present study has wide applications in education that are as follows:

- The results of the present study indicated that perceptions of teachers towards the quality of in-service teacher training programmes have increased, in relation to Sarva- Shiksha- Abhiyan interventions in Punjab, so the policymakers should prepare more plans related to such kind of interventions on a broader scale.
- The results of the present study can be used for the next policy planning for teachers.
- As the perceptions of teachers towards the quality of in-service teacher train-

ing programmes have increased, more interventions of such kind in future should be planned for the overall quality of education system.

### Suggestions for further research studies:

Hence, some suggestions in the continuity of this research endeavor are laid down for further research.

- The variable like experience and other demographic variables can be covered in future research studies.
- The present study was to a larger extent quantitative in nature. Some qualitative studies on the functioning of schools, in-service training programmes, and various other interventions can be undertaken in future researches.

### REFERENCES:

- Agarwal, V. P., & Kamalesrao, G. (1997). The quality of in-service teacher training programmes for primary school teachers- An appraisal study. Teacher empowerment and school effectiveness at primary stage: International perspective. National Council of Educational Research and Training, New Delhi.
- Chakrabarty, A., & Bagchi, B. (2005). An assessment of in-service teachers' training programmes in five districts of West Bengal Institute of Development Studies, Calcutta University, Kolkata.
- Kusum (2016). Attitude of Elementary School Teachers towards Sarva Siksha Abhiyan (SSA). International Journal of Multidisciplinary Research and Modern Education, 2 (1), 212-218.
- Lingam, G. I. (2012). Beginning Teachers' Perceptions of Their Training Programme- Lessons from the Experience of a Cohort of Vanuatu Institute of Teacher Education Graduates. Creative Education, 3(4), 439-447.
- Mahanta, U. J., & Barua, P. K. (2008). Assessment of teachers' competencies and teachers' performance North East overall Welfare Action Implementation Society (NEWAIMS), Jorhat, Assam.
- MHRD (2016). Elementary Education: Right to Education. Department of School Education and Literacy, MHRD, New Delhi. Retrieved on 15th December 2016 from <http://mhrd.gov.in/rte>
- National Knowledge Commission (2007). Recommendations on school education. New Delhi: National Knowledge Commission. India.
- NCERT (2007). The reflective teachers. New Delhi: National Council of Educational Research and Training.
- Nikhat, & Khan, Z. N. (2017). Attitude of teachers towards in-service training for the improvement in quality of teaching at school level. International Education and Research Journal, 3(8), 73-75.
- Omar, C. M. Z. C (2014). The need for in-service training for teachers and its effectiveness in school. International Journal of Innovative Education and Research, 2 (11), 1-9.
- Safi, S. (2014). In- service Training programs for Schools Teachers in Afghanistan: Teachers' views about effectiveness of the in- service training. Retrieved on 25th March, 2017 from <http://www.diva-portal.org/smash/get/diva2:843263/FULLTEXT01.pdf>
- Sedega, B.S., Mishiwo, M., Seddoh, J. E., & Dorkenoo, B. A. (2019). Perception of teachers on the effectiveness on in-service education and training at the basic schools in Akatsi district of Ghana. British Journal of Education, 7(1), 1- 19.

13. SSA (n.a.). Teacher training under the Sarva Shiksha Abhiyan: Pedagogy. Department of School education & literacy, MHRD, Government of India. Retrieved on 27th August 2015 from <http://ssa.nic.in/pedagogy>
14. Surapuramath, K. A. (2012). A Study of Attitude of Teachers towards In-services Training Programmes of Sarva- Shiksha- Abhiyan. Paripex- Indian Journal of Research, 1 (12), 42-44.
15. Thecla, E. A. (2016). Teachers' Perception of the Impact of Training and Retraining on Teachers' Productivity in Enugu State, Nigeria. Journal of Research in Business and Management, 4 (3), 33- 37.
16. Uysal, H. H. (2012). Evaluation of an in-service training program for Primary- school language teachers in Turkey. Australian Journal of Teacher Education, 37 (7), 14- 29.
17. Yadav, S. K. (2012). Impact of in- service teacher training on classroom transaction: Study at a glance. Department of Teacher Education, New Delhi: NCERT.